

## EAST Search History

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
L1	4819479	@ad<"20040805"	US-PGPUB; USPAT; USOCR	ADJ	ON	2008/01/31 12:28
L3	12879	422/139-147.ccls. or (48/197r,198.1-198.8,199r,199fm,200-219,197fm,197a,127.1).ccls.	US-PGPUB; USPAT; USOCR	ADJ	ON	2008/01/31 12:29
L4	1533	I3 and (biomass or fuel) and fluidiz\$4 bed	US-PGPUB; USPAT; USOCR	ADJ	ON	2008/01/31 12:31
L5	1534	I3 and (biomass or fuel) and fluidiz\$5 bed	US-PGPUB; USPAT; USOCR	ADJ	ON	2008/01/31 12:31
L6	513	I3 and (biomass or fuel) and fluidiz\$5 bed and cataly\$7 and (reform\$4 or decompos\$4 or breaking down or convert\$4) with gas	US-PGPUB; USPAT; USOCR	ADJ	ON	2008/01/31 12:32
L7	158	I3 and (biomass or fuel) and fluidiz\$5 bed and cataly\$7 and (reform\$4 or decompos\$4 or breaking down or convert\$4) with gas and (adsorb\$4 or absorb\$4) with gas	US-PGPUB; USPAT; USOCR	ADJ	ON	2008/01/31 12:32
L8	123	I3 and (biomass or fuel) and fluidiz\$5 bed and cataly\$7 and (reform\$4 or decompos\$4 or breaking down or convert\$4) with gas and (adsorb\$4 or absorb\$4) with gas and (heat exchang\$4 or cool\$4) with gas	US-PGPUB; USPAT; USOCR	ADJ	ON	2008/01/31 12:33
L9	68	I3 and (biomass or fuel) and fluidiz\$5 bed and cataly\$7 and (reform\$4 or decompos\$4 or breaking down or convert\$4) with gas and (adsorb\$4 or absorb\$4) with gas and (heat exchang\$4 or cool\$4) with gas and (compress\$4 or stor\$4) with gas	US-PGPUB; USPAT; USOCR	ADJ	ON	2008/01/31 12:33
L10	60	I3 and (biomass or fuel) and fluidiz\$5 bed and cataly\$7 and (reform\$4 or decompos\$4 or breaking down or convert\$4) with gas and (adsorb\$4 or absorb\$4) with gas and (heat exchang\$4 or cool\$4) with gas and (compress\$4 or stor\$4) with gas and air and steam	US-PGPUB; USPAT; USOCR	ADJ	ON	2008/01/31 12:34

## EAST Search History

L11	44	l3 and (biomass or fuel) and fluidiz\$5 bed and cataly\$7 and (reform\$4 or decompos\$4 or breaking down or convert\$4) with gas and (adsorb\$4 or absorb\$4) with gas and (heat exchang\$4 or cool\$4) with gas and (compress\$4 or stor\$4) with gas and air and steam and gasif\$7	US-PGPUB; USPAT; USOCR	ADJ	ON	2008/01/31 12:34
L12	30	l3 and (biomass or fuel) and fluidiz\$5 bed and cataly\$7 and (reform\$4 or decompos\$4 or breaking down or convert\$4) with gas and (adsorb\$4 or absorb\$4) with gas and (heat exchang\$4 or cool\$4) with gas and (compress\$4 or stor\$4) with gas and air and steam and gasif\$7 and l1	US-PGPUB; USPAT; USOCR	ADJ	ON	2008/01/31 12:35
L13	12	l12 and (circulat\$4 with catalyst or tar with (scrub\$4 or condens\$4 or strip\$4 or separat\$4 or remov\$4))	US-PGPUB; USPAT; USOCR	ADJ	ON	2008/01/31 12:36
L14	4	l13 and adsorb\$4	US-PGPUB; USPAT; USOCR	ADJ	ON	2008/01/31 12:38
L15	1	l12 and (circulat\$4 with catalyst and tar with (scrub\$4 or condens\$4 or strip\$4 or separat\$4 or remov\$4))	US-PGPUB; USPAT; USOCR	ADJ	ON	2008/01/31 12:38
L16	0	l12 and (circulat\$4 with catalyst and tar with (scrub\$4 or condens\$4 or strip\$4 or separat\$4 or remov\$4)) and adsorb\$4	US-PGPUB; USPAT; USOCR	ADJ	ON	2008/01/31 12:42
L17	5	l14 or l15	US-PGPUB; USPAT; USOCR	ADJ	ON	2008/01/31 12:44
L18	5	((("5213587") or ("5032143") or ("4662210") or ("4390503") or ("3988236"))).PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2008/01/31 12:45
L19	5	l18 and (coal or waste or oil or ash or dust or tar or screw or spiral\$4)	US-PGPUB; USPAT; USOCR	ADJ	ON	2008/01/31 12:46
L20	5	l18 and (coal or waste or oil or ash or dust or screw or spiral\$4)	US-PGPUB; USPAT; USOCR	ADJ	ON	2008/01/31 12:46
L21	5	l17 and (coal or waste or oil or ash or dust or screw or spiral\$4)	US-PGPUB; USPAT; USOCR	ADJ	ON	2008/01/31 12:58
L22	5	l18 and (nitrogen or sulfur)	US-PGPUB; USPAT; USOCR	ADJ	ON	2008/01/31 13:04

## EAST Search History

L25	4	l18 and (burn\$4 or volatiliz\$5 or boil\$4 or evaporat\$5 or sublim\$5)	US-PGPUB; USPAT; USOCR	ADJ	ON	2008/01/31 13:08
L26	5	l17 and (burn\$4 or volatiliz\$4 or boil\$4 or evaporat\$4 or sublim\$5 or nitrogen or sulfur or adsorb\$4)	US-PGPUB; USPAT; USOCR	ADJ	ON	2008/01/31 13:11
L27	17	(US-20050166810-\$ or US-20020159929-\$ or US-20040244289-\$).did. or (US-6645442-\$ or US-4308128-\$ or US-4395495-\$ or US-3926775-\$ or US-5032143-\$ or US-4622210-\$ or US-4390503-\$ or US-3988236-\$ or US-5213587-\$).did. or (JP-2003342588-\$ or JP-2004149556-\$ or US-20030115800-\$ or WO-8904354-\$ or WO-9630464-\$). did.	US-PGPUB; USPAT; DERWENT	ADJ	ON	2008/01/31 13:12
L28	1	screw feeder and l27	US-PGPUB; USPAT; USOCR	ADJ	ON	2008/01/31 13:12
L29	4	l18 and gas with (stor\$4 or compress\$4)	US-PGPUB; USPAT; USOCR	ADJ	ON	2008/01/31 13:13
L30	5	l18 and (tar or liquid) same (condens\$4 or scrub\$4 or strip\$4 or separat\$4)	US-PGPUB; USPAT; USOCR	ADJ	ON	2008/01/31 13:15
L31	5	l17 and (burn\$4 or volatiliz\$4 or boil\$4 or evaporat\$4 or sublim\$5 or nitrogen or sulfur or adsorb\$4) and (tar or liquid) same (condens\$4 or scrub\$4 or strip\$4 or separat\$4)	US-PGPUB; USPAT; USOCR	ADJ	ON	2008/01/31 13:16
L32	5	l31 and (heat exchang\$4 or cool\$3)	US-PGPUB; USPAT; USOCR	ADJ	ON	2008/01/31 13:16
L33	5	l32 and (waste or oil or biomass or coal)	US-PGPUB; USPAT; USOCR	ADJ	ON	2008/01/31 13:19
L34	4	l18 and condens\$5 and tar	US-PGPUB; USPAT; USOCR	ADJ	ON	2008/01/31 14:16
L35	4	l18 and tar and (scrub\$4 or condens\$4 or strip\$4 or separat\$4 or remov\$4)	US-PGPUB; USPAT; USOCR	ADJ	ON	2008/01/31 14:17
L36	4	l18 and tar same (scrub\$4 or condens\$4 or strip\$4 or separat\$4 or remov\$4)	US-PGPUB; USPAT; USOCR	ADJ	ON	2008/01/31 14:19

## EAST Search History

L37	4	l18 and gas same (stor\$4 or compress\$4)	US-PGPUB; USPAT; USOCR	ADJ	ON	2008/01/31 14:20
L38	2	l18 and stor\$4	US-PGPUB; USPAT; USOCR	ADJ	ON	2008/01/31 14:21
L39	3	(limestone or lime or alkaline or calcium or magnesium or barium or alkali or potassium or alumina or powder) and l18	US-PGPUB; USPAT; USOCR	ADJ	ON	2008/01/31 14:31
L40	4	l18 and cyclone	US-PGPUB; USPAT; USOCR	ADJ	ON	2008/01/31 14:33
L41	3	l18 and hydrogen	US-PGPUB; USPAT; USOCR	ADJ	ON	2008/01/31 14:35
L42	4	l18 and steam	US-PGPUB; USPAT; USOCR	ADJ	ON	2008/01/31 14:39
L43	1	l18 and "NH.sub.3"	US-PGPUB; USPAT; USOCR	ADJ	ON	2008/01/31 14:55
L44	2	l18 and ammonia	US-PGPUB; USPAT; USOCR	ADJ	ON	2008/01/31 14:55
L45	1	l18 and ammonia and metal	US-PGPUB; USPAT; USOCR	ADJ	ON	2008/01/31 14:55
L46	1	l18 and ammonia and (ni or nickel or fe or iron or co or cobalt or mo or mn or zr or ti or titanium or ce or ru or rh or pt or platinum)	US-PGPUB; USPAT; USOCR	ADJ	ON	2008/01/31 14:56
L47	17	(US-20050166810-\$ or US-20020159929-\$ or US-20040244289-\$).did. or (US-6645442-\$ or US-4308128-\$ or US-4395495-\$ or US-3926775-\$ or US-5032143-\$ or US-4622210-\$ or US-4390503-\$ or US-3988236-\$ or US-5213587-\$).did. or (JP-2003342588-\$ or JP-2004149556-\$ or US-20030115800-\$ or WO-8904354-\$ or WO-9630464-\$). did.	US-PGPUB; USPAT; DERWENT	ADJ	ON	2008/01/31 14:57
L48	2	l47 and steam with spray\$4 and clog\$4	US-PGPUB; USPAT; USOCR	ADJ	ON	2008/01/31 14:57

## EAST Search History

L49	5	l18 and temperature	US-PGPUB; USPAT; USOCR	ADJ	ON	2008/01/31 14:58
L50	10	l47 and (ni or nickel or fe or iron or co or cobalt or mo or mn or zr or ti or titanium or ce or ru or rh or pt or platinum)	US-PGPUB; USPAT; USOCR	ADJ	ON	2008/01/31 15:07
L51	8	l47 and (ni or nickel or fe or iron or cobalt or mo or mn or zr or ti or titanium or ce or ru or rh or pt or platinum)	US-PGPUB; USPAT; USOCR	ADJ	ON	2008/01/31 15:13
L52	1	l18 and ammonia with tar	US-PGPUB; USPAT; USOCR	ADJ	ON	2008/01/31 15:24
L53	3	l47 and (ni or nickel or fe or iron or cobalt or mo or mn or zr or ti or titanium or ce or ru or rh or pt or platinum) same tar	US-PGPUB; USPAT; USOCR	ADJ	ON	2008/01/31 15:24
S2	1	10/560992	US-PGPUB; USPAT; USOCR	ADJ	ON	2008/01/28 11:36
S3	1	jp-2003342588-\$.did.	DERWENT	ADJ	ON	2008/01/28 11:38
S4	1	jp-2004149556-\$.did.	DERWENT	ADJ	ON	2008/01/28 11:38
S5	1	jp-2003246990-\$.did.	DERWENT	ADJ	ON	2008/01/28 11:38
S6	1	wo-8904354-\$.did.	DERWENT	ADJ	ON	2008/01/28 11:39
S7	1	wo-9630464-\$.did.	DERWENT	ADJ	ON	2008/01/28 11:39
S10	5171465	@ad<"20050614"	US-PGPUB; USPAT; USOCR	ADJ	ON	2008/01/28 11:54
S11	5	S10 and gasifier and (feeder or injector) and dust and heat exchang\$4 and cataly\$8 and tar and pump	US-PGPUB; USPAT; USOCR	ADJ	ON	2008/01/28 12:06
S12	5171465	@ad<"20050614"	US-PGPUB; USPAT; USOCR	ADJ	ON	2008/01/28 15:40
S13	0	S12 and gasifier and (feeder or injector) and dust and heat exchang\$4 and cataly\$8 and tar and pump	FPRS; EPO; JPO	ADJ	ON	2008/01/28 15:40
S14	0	gasifier and (feeder or injector) and dust and heat exchang\$4 and cataly\$8 and tar and pump	FPRS; EPO; JPO	ADJ	ON	2008/01/28 15:40
S15	5	S12 and gasifier and (feeder or injector) and dust and heat exchang\$4 and cataly\$8 and tar and pump	US-PGPUB; USPAT; USOCR	ADJ	ON	2008/01/28 16:35

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S16	2	S15 and scrub\$4	US-PGPUB; USPAT; USOCR	ADJ	ON	2008/01/28 16:35
S17	0	S15 and scrub\$4 with tar	US-PGPUB; USPAT; USOCR	ADJ	ON	2008/01/28 16:36
S18	21	S12 and gasif\$5 and (feeder or injector) and dust and heat exchang\$4 and cataly\$8 and tar and pump	US-PGPUB; USPAT; USOCR	ADJ	ON	2008/01/28 16:36
S19	44	S12 and gasif\$7 and (feeder or injector) and dust and heat exchang\$4 and cataly\$8 and tar and pump	US-PGPUB; USPAT; USOCR	ADJ	ON	2008/01/28 16:36
S21	4	S12 and gasif\$7 and (feeder or injector) and dust with collect\$4 and heat exchang\$4 and cataly\$8 and tar with scrub\$4 and pump	US-PGPUB; USPAT; USOCR	ADJ	ON	2008/01/28 16:36
S22	4	S12 and gasif\$7 and (feeder or injector) and dust with collect\$4 and heat exchang\$4 and cataly\$8 and tar with scrub\$4 and pump and ash	US-PGPUB; USPAT; USOCR	ADJ	ON	2008/01/28 16:37
S23	1	("20070094929").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2008/01/28 16:37
S24	1	S23 and screw	US-PGPUB; USPAT; USOCR	ADJ	ON	2008/01/28 16:38
S25	1	S23 and hopper	US-PGPUB; USPAT; USOCR	ADJ	ON	2008/01/28 16:40
S26	0	S12 and gasif\$7 and (feeder or injector) and dust with collect\$4 and heat exchang\$4 and cataly\$8 and tar with scrub\$4 and pump with air and ash	US-PGPUB; USPAT; USOCR	ADJ	ON	2008/01/28 16:43
S27	0	S12 and gasif\$7 and (feeder or injector) and dust with collect\$4 and heat exchang\$4 and cataly\$8 and tar with scrub\$4 and pump with tar and ash	US-PGPUB; USPAT; USOCR	ADJ	ON	2008/01/28 16:49
S28	1	S12 and gasif\$7 and (feeder or injector) and dust with collect\$4 and heat exchang\$4 and cataly\$8 and tar with scrub\$4 and stor\$4 with gas and ash	US-PGPUB; USPAT; USOCR	ADJ	ON	2008/01/28 16:50

## EAST Search History

S29	5	(JP-2003342588-\$ or JP-2004149556-\$ or US-20030115800-\$ or WO-8904354-\$ or WO-9630464-\$). did.	DERWENT	ADJ	ON	2008/01/30 10:35
S30	0	S29 and (screw\$4 or spiral\$3)	US-PGPUB; USPAT; USOCR	ADJ	ON	2008/01/30 10:36
S31	5173647	@ad<"20050614"	US-PGPUB; USPAT; USOCR	ADJ	ON	2008/01/30 10:36
S32	5	S31 and gasifier and (feeder or injector) and dust and heat exchang\$4 and cataly\$8 and tar and pump	US-PGPUB; USPAT; USOCR	ADJ	ON	2008/01/30 10:36
S33	7	S31 and gasif\$7 and (feeder or injector) and dust and heat exchang\$4 and cataly\$8 and tar with scrub\$4 and pump	US-PGPUB; USPAT; USOCR	ADJ	ON	2008/01/30 10:36
S34	15	S31 and gasif\$7 and (feeder or injector) with (screw\$4 or spiral\$4 or serpentine or coil\$3) and dust and heat exchang\$4 and cataly\$8 and tar and pump	US-PGPUB; USPAT; USOCR	ADJ	ON	2008/01/30 10:37
S35	2	S33 and S34	US-PGPUB; USPAT; USOCR	ADJ	ON	2008/01/30 10:38
S36	13	S31 and gasif\$7 and (feeder or injector) with (screw\$4 or spiral\$4 or serpentine or coil\$3) and dust and heat exchang\$4 and cataly\$8 and tar and pump not S35	US-PGPUB; USPAT; USOCR	ADJ	ON	2008/01/30 10:40
S37	11	S31 and gasif\$7 and (feeder or injector) with (screw\$4 or spiral\$4 or serpentine or coil\$3) and dust and heat exchang\$4 and cataly\$8 and tar and pump and bed not S35	US-PGPUB; USPAT; USOCR	ADJ	ON	2008/01/30 10:45
S38	4	S31 and gasif\$7 and (feeder or injector) with (screw\$4 or spiral\$4 or serpentine or coil\$3) and dust with (collect\$4 or captur\$4) and heat exchang\$4 and cataly\$8 and tar and pump and bed not S35	US-PGPUB; USPAT; USOCR	ADJ	ON	2008/01/30 10:46
S39	2	S31 and gasif\$7 and (feeder or injector) with (screw\$4 or spiral\$4 or serpentine or coil\$3) and dust with (collect\$4 or captur\$4) and heat exchang\$4 and cataly\$8 with reform\$4 and tar and pump and bed not S35	US-PGPUB; USPAT; USOCR	ADJ	ON	2008/01/30 10:46

## EAST Search History

S40	2	S31 and gasif\$7 and (feeder or injector) with (screw\$4 or spiral\$4 or serpentine or coil\$3) and dust with (collect\$4 or captur\$4) and heat exchang\$4 and cataly\$8 with reform\$4 and tar and pump and bed with (fluid\$5 or cataly\$8) not S35	US-PGPUB; USPAT; USOCR	ADJ	ON	2008/01/30 10:46
S41	2	S31 and gasif\$7 and (feeder or injector) with (screw\$4 or spiral\$4 or serpentine or coil\$3) and dust with (collect\$4 or captur\$4) and heat exchang\$4 and cataly\$8 with reform\$4 and tar and pump and bed with (fluid\$5 or cataly\$8) and (method or process)	US-PGPUB; USPAT; USOCR	ADJ	ON	2008/01/30 10:49
S42	1	("20020159929").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2008/01/30 11:07
S43	1	S42 and fuel and (biomass or organic waste or coal or heavy oil) and screw feeder	US-PGPUB; USPAT; USOCR	ADJ	ON	2008/01/30 11:07
S44	1	S42 and (organic waste or coal or heavy oil) and screw feeder	US-PGPUB; USPAT; USOCR	ADJ	ON	2008/01/30 11:48
S45	1	S42 and waste	US-PGPUB; USPAT; USOCR	ADJ	ON	2008/01/30 11:48
S46	1	S42 and biomass same (waste or coal or heavy oil) and screw feeder	US-PGPUB; USPAT; USOCR	ADJ	ON	2008/01/30 11:49
S47	1	("6645442").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2008/01/30 11:53
S48	1	S42 and (circulat\$4 or fluid\$4 near2 bed or dry\$4 or volatiliz\$4 or cataly\$8 near gasify\$4 or burn\$4 or air near2 (hot or heat\$4) or superheat\$4 near2 steam)	US-PGPUB; USPAT; USOCR	ADJ	ON	2008/01/30 12:00
S49	1	S42 and (circulat\$4 or fluid\$4 near2 bed or dry\$4 or volatiliz\$4 or cataly\$8 near gasify\$4 or burn\$4 or air with (hot or heat\$4) or superheat\$4 with steam or boil\$4 or evaporat\$4 or sublim\$5)	US-PGPUB; USPAT; USOCR	ADJ	ON	2008/01/30 12:05



## EAST Search History

S50	1	S42 and (circulat\$4 or bed or dry\$4 or volatiliz\$4 or cataly\$8 near gasify\$4 or burn\$4 or air with (hot or heat\$4) or superheat\$4 with steam or boil\$4 or evaporat\$4 or sublim\$5)	US-PGPUB; USPAT; USOCR	ADJ	ON	2008/01/30 12:10
S51	1	S42 and (circulat\$4 or bed or dry\$4 or volatiliz\$4 or cataly\$8 near gasify\$4 or burn\$4 or air or steam or boil\$4 or evaporat\$4 or sublim\$5)	US-PGPUB; USPAT; USOCR	ADJ	ON	2008/01/30 12:10
S52	1	S42 and (circulat\$4 or bed or dry\$4 or volatiliz\$4 or cataly\$8 near gasify\$4 or burn\$4 or air or steam or boil\$4 or evaporat\$4 or sublim\$5) and cataly\$8	US-PGPUB; USPAT; USOCR	ADJ	ON	2008/01/30 12:14
S53	1	S42 and (circulat\$4 or bed or dry\$4 or volatiliz\$4 or cataly\$8 near gasify\$4 or burn\$4 or air or steam or boil\$4 or evaporat\$4 or sublim\$5)	US-PGPUB; USPAT; USOCR	ADJ	ON	2008/01/30 12:16
S54	1	S42 and (circulat\$4 or bed or dry\$4 or volatiliz\$4 or cataly\$8 near gasify\$4 or burn\$4 or air or boil\$4 or evaporat\$4 or sublim\$5)	US-PGPUB; USPAT; USOCR	ADJ	ON	2008/01/30 12:17
S55	1	S42 and cataly\$8 same gasify\$4	US-PGPUB; USPAT; USOCR	ADJ	ON	2008/01/30 12:18
S56	1	S42 and collect\$4 same (dust or fly ash)	US-PGPUB; USPAT; USOCR	ADJ	ON	2008/01/30 12:19
S57	1	S42 and ash	US-PGPUB; USPAT; USOCR	ADJ	ON	2008/01/30 12:19
S58	0	S42 and fly ash	US-PGPUB; USPAT; USOCR	ADJ	ON	2008/01/30 12:20
S59	0	S42 and fly-ash	US-PGPUB; USPAT; USOCR	ADJ	ON	2008/01/30 12:20
S60	0	S42 and flyash	US-PGPUB; USPAT; USOCR	ADJ	ON	2008/01/30 12:20
S61	1	S42 and (ash or dust) same collect\$4	US-PGPUB; USPAT; USOCR	ADJ	ON	2008/01/30 12:20
S62	0	S42 and reform\$4 same bed	US-PGPUB; USPAT; USOCR	ADJ	ON	2008/01/30 12:21

## EAST Search History

S63	0	S42 and cataly\$8 same bed	US-PGPUB; USPAT; USOCR	ADJ	ON	2008/01/30 12:21
S64	1	S42 and bed	US-PGPUB; USPAT; USOCR	ADJ	ON	2008/01/30 12:22
S65	1	S42 and (tar or nitrogen or aromatic or phosphorous or sulfur or layer)	US-PGPUB; USPAT; USOCR	ADJ	ON	2008/01/30 12:23
S66	8	(US-20050166810-\$ or US-20020159929-\$).did. or (US-6645442-\$).did. or (JP-2003342588-\$ or JP-2004149556-\$ or US-20030115800-\$ or WO-8904354-\$ or WO-9630464-\$). did.	US-PGPUB; USPAT; DERWENT	ADJ	ON	2008/01/30 12:36
S67	2	S66 and (nitrogen or aromatic or phosphorous or sulfur)	US-PGPUB; USPAT; USOCR	ADJ	ON	2008/01/30 12:36
S68	43	S31 and gasif\$7 and (feeder or injector) and dust and heat exchang\$4 and cataly\$8 and tar and pump and (nitrogen or aromatic or phosphorous or sulfur)	US-PGPUB; USPAT; USOCR	ADJ	ON	2008/01/30 12:58
S69	0	S31 and nitrogen near aromatic and phosphorous and sulfur and nitrogen near tar and gasif\$7	US-PGPUB; USPAT; USOCR	ADJ	ON	2008/01/30 12:59
S70	1	nitrogen near aromatic and phosphorous and sulfur and nitrogen near tar and gasif\$7	US-PGPUB; USPAT; USOCR	ADJ	ON	2008/01/30 13:00
S71	38	S31 and aromatic and phosphorous and sulfur and nitrogen and tar and gasif\$7	US-PGPUB; USPAT; USOCR	ADJ	ON	2008/01/30 13:00
S72	6	S31 and (aromatic and phosphorous and sulfur and nitrogen and tar and gasif\$7) same cataly\$7	US-PGPUB; USPAT; USOCR	ADJ	ON	2008/01/30 13:00
S73	0	S31 and (aromatic with nitrogen and phosphorous and sulfur and nitrogen and tar and gasif\$7) same cataly\$7	US-PGPUB; USPAT; USOCR	ADJ	ON	2008/01/30 13:01
S74	4	S31 and (aromatic and phosphorous and sulfur and nitrogen and tar with nitrogen and gasif\$7) same cataly\$7	US-PGPUB; USPAT; USOCR	ADJ	ON	2008/01/30 13:01
S75	1	("20070094929").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2008/01/30 14:23

## EAST Search History

S76	1	S75 and tar nitrogen	US-PGPUB; USPAT; USOCR	ADJ	ON	2008/01/30 14:23
S77	1	("20020159929").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2008/01/30 14:27
S78	1	S77 and fluid\$5 with bed	US-PGPUB; USPAT; USOCR	ADJ	ON	2008/01/30 14:27
S79	0	fuel and gasif\$7 and tar and reform\$4 and heat exchang\$4	FPRS; EPO; JPO	ADJ	ON	2008/01/30 14:32
S80	5173647	@ad<"20050614"	US-PGPUB; USPAT; USOCR	ADJ	ON	2008/01/30 14:32
S81	551	S80 and fuel and gasif\$7 and tar and reform\$4 and heat exchang\$4	US-PGPUB; USPAT; USOCR	ADJ	ON	2008/01/30 14:32
S82	75	S80 and fuel and gasif\$7 and tar and reform\$4 and heat exchang\$4 and (dust or fly ash) and waste and coal and oil and air and steam	US-PGPUB; USPAT; USOCR	ADJ	ON	2008/01/30 14:34
S83	55	S80 and fuel and gasif\$7 and tar and reform\$4 and heat exchang\$4 and (dust or fly ash) and waste and coal and oil and air and steam and dry\$4 and burn\$4 and (volatiliz\$4 or boil\$4 or evaporat\$4 or sublim\$4)	US-PGPUB; USPAT; USOCR	ADJ	ON	2008/01/30 14:35
S84	20	S80 and fuel and gasif\$7 and tar and reform\$4 and heat exchang\$4 and (dust or fly ash) and waste and coal and oil and air and steam and dry\$4 and burn\$4 and (volatiliz\$4 or boil\$4 or evaporat\$4 or sublim\$4) and cataly\$8 with bed	US-PGPUB; USPAT; USOCR	ADJ	ON	2008/01/30 14:35
S85	20	S80 and fuel and gasif\$7 and tar and reform\$4 and heat exchang\$4 and (dust or fly ash) and waste and coal and oil and air and steam and dry\$4 and burn\$4 and (volatiliz\$4 or boil\$4 or evaporat\$4 or sublim\$4) and cataly\$8 with bed and condens\$4	US-PGPUB; USPAT; USOCR	ADJ	ON	2008/01/30 14:36

## EAST Search History

S86	19	S80 and fuel and gasif\$7 and tar and reform\$4 and heat exchang\$4 and (dust or fly ash) and waste and coal and oil and air and steam and dry\$4 and burn\$4 and (volatiliz\$4 or boil\$4 or evaporat\$4 or sublim\$4) and cataly\$8 with bed and condens\$4 and (compress\$4 or stor\$4) with gas	US-PGPUB; USPAT; USOCR	ADJ	ON	2008/01/30 14:36
S87	16	S80 and fuel and gasif\$7 and tar and reform\$4 and heat exchang\$4 and (dust or fly ash) and waste and coal and oil and air and steam and dry\$4 and burn\$4 and (volatiliz\$4 or boil\$4 or evaporat\$4 or sublim\$4) and cataly\$8 with bed and condens\$4 and (compress\$4 or stor\$4) with gas and strip\$4	US-PGPUB; USPAT; USOCR	ADJ	ON	2008/01/30 14:37
S88	16	S80 and fuel and gasif\$7 and tar and reform\$4 and heat exchang\$4 and (dust or fly ash) and waste and coal and oil and air and steam and dry\$4 and burn\$4 and (volatiliz\$4 or boil\$4 or evaporat\$4 or sublim\$4) and cataly\$8 with bed and condens\$4 and (compress\$4 or stor\$4) with gas and strip\$4 and (feeder or injector or inlet or input)	US-PGPUB; USPAT; USOCR	ADJ	ON	2008/01/30 14:37
S89	1	S80 and fuel and gasif\$7 and tar and reform\$4 and heat exchang\$4 and (dust or fly ash) and waste and coal and oil and air and steam and dry\$4 and burn\$4 and (volatiliz\$4 or boil\$4 or evaporat\$4 or sublim\$4) and cataly\$8 with bed and condens\$4 and (compress\$4 or stor\$4) with gas and strip\$4 and (feeder or injector or inlet or input) and adsorbent with bed	US-PGPUB; USPAT; USOCR	ADJ	ON	2008/01/30 14:38
S90	2214	422/139-147.ccls. and fluidiz\$4 with bed	US-PGPUB; USPAT; USOCR	ADJ	ON	2008/01/30 15:14
S91	1319	422/139-147.ccls. and fluidiz\$4 with bed and S80	US-PGPUB; USPAT; USOCR	ADJ	ON	2008/01/30 15:16
S92	9	S91 and cataly\$8 and reform\$4 and heat exchang\$4 and (ash or dust) and (stor\$4 or compress\$4)	US-PGPUB; USPAT; USOCR	ADJ	ON	2008/01/30 15:17

## EAST Search History

S93	0	S91 and cataly\$8 with reform\$4 and (((cool\$4 or decreas\$4 near2 temperature) with gas) or heat exchang\$4) and (collect\$4 or captur\$4) near6 (ash or dust) and (stor\$4 or compress\$4)	US-PGPUB; USPAT; USOCR	ADJ	ON	2008/01/30 15:35
S94	2	S91 and cataly\$8 with reform\$4 and (((cool\$4 or decreas\$4 near2 temperature) with gas) or heat exchang\$4) and (collect\$4 or captur\$4) same (ash or dust) and (stor\$4 or compress\$4)	US-PGPUB; USPAT; USOCR	ADJ	ON	2008/01/30 15:36
S95	22	S80 and fluid\$4 near2 bed and cataly\$8 with reform\$4 and (((cool\$4 or decreas\$4 near2 temperature) with gas) or heat exchang\$4) and (collect\$4 or captur\$4) near6 (ash or dust) and (stor\$4 or compress\$4)	US-PGPUB; USPAT; USOCR	ADJ	ON	2008/01/30 15:37
S96	7	(sung kyu near2 kang or hyun-dong near2 shin).in.	US-PGPUB; USPAT; USOCR	ADJ	ON	2008/01/30 16:45
S97	9	(sung kyu near2 kang or hyun dong near2 shin).in.	US-PGPUB; USPAT; USOCR	ADJ	ON	2008/01/30 16:45
S98	5	(sung kyu near2 kang and hyun dong near2 shin).in.	US-PGPUB; USPAT; USOCR	ADJ	ON	2008/01/30 16:45
S99	5173647	@ad<"20050614"	US-PGPUB; USPAT; USOCR	ADJ	ON	2008/01/30 16:46
S10 0	8	(sung kyu near2 kang or hyun dong near2 shin).in. and S99	US-PGPUB; USPAT; USOCR	ADJ	ON	2008/01/30 16:46
S10 1	4819391	@ad<"20040805"	US-PGPUB; USPAT; USOCR	ADJ	ON	2008/01/30 16:47
S10 2	42844	S101 and fluidized near2 bed	US-PGPUB; USPAT; USOCR	ADJ	ON	2008/01/30 16:52
S10 3	474	S102 and fuel and gasif\$7 and cataly\$7 with reform\$3	US-PGPUB; USPAT; USOCR	ADJ	ON	2008/01/30 16:53
S10 4	220	S103 and (ash or dust) and tar with (scrub\$4 or condens\$4 or separat\$4 or strip\$4)	US-PGPUB; USPAT; USOCR	ADJ	ON	2008/01/30 16:58

## EAST Search History

S10 5	216	S103 and (ash or dust) and tar with (scrub\$4 or condens\$4 or separat\$4 or strip\$4) and gas with (stor\$4 or compress\$4)	US-PGPUB; USPAT; USOCR	ADJ	ON	2008/01/30 16:59
S10 6	1	S105 and adsorbent near2 bed	US-PGPUB; USPAT; USOCR	ADJ	ON	2008/01/30 17:00
S10 7	214	S105 and steam and air	US-PGPUB; USPAT; USOCR	ADJ	ON	2008/01/30 17:01
S10 8	620	S101 and fluidized near2 bed and adsorbent near2 bed	US-PGPUB; USPAT; USOCR	ADJ	ON	2008/01/30 17:01
S10 9	12	S102 and fuel and gasif\$7 and cataly\$7 with reform\$3 and adsorbent near2 bed	US-PGPUB; USPAT; USOCR	ADJ	ON	2008/01/30 17:02
S11 0	44	S102 and fuel and cataly\$7 with reform\$3 and adsorbent near2 bed and steam and air	US-PGPUB; USPAT; USOCR	ADJ	ON	2008/01/30 17:04
S11 1	9	S102 and fuel and gasif\$7 and cataly\$7 with reform\$3 and adsorbent near2 bed and steam and air	US-PGPUB; USPAT; USOCR	ADJ	ON	2008/01/30 17:05
S11 2	2	S102 and fuel and gasif\$7 and cataly\$7 with reform\$3 and adsorbent near2 bed and steam and air and (dust or ash)	US-PGPUB; USPAT; USOCR	ADJ	ON	2008/01/30 17:05
S11 3	30792	S102 and (waste or coal or oil or screw\$4 or coil\$3 or serpentine or zigzag or feeder or injector)	US-PGPUB; USPAT; USOCR	ADJ	ON	2008/01/30 17:16
S11 4	2	S112 and (waste or coal or oil or screw\$4 or coil\$3 or serpentine or zigzag or feeder or injector)	US-PGPUB; USPAT; USOCR	ADJ	ON	2008/01/30 17:16
S11 5	10	(US-20050166810-\$ or US-20020159929-\$).did. or (US-6645442-\$ or US-4308128-\$ or US-4395495-\$).did. or (JP-2003342588-\$ or JP-2004149556-\$ or US-20030115800-\$ or WO-8904354-\$ or WO-9630464-\$). did.	US-PGPUB; USPAT; DERWENT	ADJ	ON	2008/01/30 17:17
S11 6	5	S115 and (waste or coal or oil or screw\$4 or coil\$3 or serpentine or zigzag or feeder or injector)	US-PGPUB; USPAT; USOCR	ADJ	ON	2008/01/30 17:17
S11 7	5	S115 and (biomass or dry\$3 or gasif\$7 or boil\$3 or evaporat\$4 or sublim\$5 or cool\$3 or chang\$4 with temperature or tar)	US-PGPUB; USPAT; USOCR	ADJ	ON	2008/01/30 17:19

## EAST Search History

S11 8	5	S115 and (biomass or dry\$3 or volatil\$3 or boil\$3 or evaporat\$4 or sublim\$5 or cool\$3 or chang\$4 with temperature or tar)	US-PGPUB; USPAT; USOCR	ADJ	ON	2008/01/30 17:20
S11 9	5	S115 and (biomass or dry\$3 or volatil\$4 or boil\$3 or evaporat\$4 or sublim\$5 or cool\$3 or chang\$4 with temperature or tar)	US-PGPUB; USPAT; USOCR	ADJ	ON	2008/01/30 17:21
S12 0	0	S115 and (circulat\$4 with cataly\$7)	US-PGPUB; USPAT; USOCR	ADJ	ON	2008/01/30 17:22
S12 1	38	S103 and (circulat\$4 with cataly\$7)	US-PGPUB; USPAT; USOCR	ADJ	ON	2008/01/30 17:22
S12 2	0	"I38" and (ash or dust) and tar with (scrub\$4 or condens\$4 or separat\$4 or strip\$4)	US-PGPUB; USPAT; USOCR	ADJ	ON	2008/01/30 17:23
S12 3	0	"I38" and (ash or dust) and tar with (scrub\$4 or condens\$4 or separat\$4 or strip\$4)	US-PGPUB; USPAT; USOCR	ADJ	ON	2008/01/30 17:23
S12 4	2	S121 and (ash or dust) and tar with (scrub\$4 or condens\$4 or separat\$4 or strip\$4)	US-PGPUB; USPAT; USOCR	ADJ	ON	2008/01/30 17:23
S12 5	2	S124 and (waste or coal or oil or screw\$4 or coil\$3 or serpentine or zigzag or feeder or injector or biomass or dry\$3 or volatil\$4 or boil\$3 or evaporat\$4 or sublim\$5 or cool\$3 or chang\$4 with temperature or tar)	US-PGPUB; USPAT; USOCR	ADJ	ON	2008/01/30 17:38
S12 6	1	("20040244289").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2008/01/30 17:39
S12 7	1	S126 and (waste or coal or oil or screw\$4 or coil\$3 or serpentine or zigzag or feeder or injector or biomass or dry\$3 or volatil\$4 or boil\$3 or evaporat\$4 or sublim\$5 or cool\$3 or chang\$4 with temperature or tar)	US-PGPUB; USPAT; USOCR	ADJ	ON	2008/01/30 17:40
S12 8	1	S126 and (waste or coal or oil or screw\$4 or coil\$3 or serpentine or zigzag or feeder or injector or biomass or dry\$3 or volatil\$4 or boil\$3 or evaporat\$4 or sublim\$5 or cool\$3 or chang\$4 with temperature or tar or condens\$4 or strip\$4 or scrub\$4)	US-PGPUB; USPAT; USOCR	ADJ	ON	2008/01/30 17:40

## EAST Search History

S12 9	1	S126 and (waste or coal or oil or screw\$4 or coil\$3 or serpentine or zigzag or feeder or injector or biomass or dry\$3 or volatil\$4 or boil\$3 or evaporat\$4 or sublim\$5 or cool\$3 or chang\$4 with temperature or tar with (condens\$4 or strip\$4 or scrub\$4 or separat\$4))	US-PGPUB; USPAT; USOCR	ADJ	ON	2008/01/30 17:43
S13 0	1	("20040244289").PN.	US-PGPUB; USPAT; USOCR	OR	OFF	2008/01/31 10:05
S13 1	1	S130 and (circulat\$4 or recirculat or fluidiz\$4 with bed)	US-PGPUB; USPAT; USOCR	ADJ	ON	2008/01/31 10:05
S13 2	12	(US-20050166810-\$ or US-20020159929-\$ or US-20040244289-\$).did. or (US-6645442-\$ or US-4308128-\$ or US-4395495-\$ or US-3926775-\$). did. or (JP-2003342588-\$ or JP-2004149556-\$ or US-20030115800-\$ or WO-8904354-\$ or WO-9630464-\$). did.	US-PGPUB; USPAT; DERWENT	ADJ	ON	2008/01/31 10:11
S13 3	4819479	@ad<"20040805"	US-PGPUB; USPAT; USOCR	ADJ	ON	2008/01/31 10:11
S13 4	7	S133 and cataly\$8 with circulat\$4 with fluidized near2 bed with gasif\$7	US-PGPUB; USPAT; USOCR	ADJ	ON	2008/01/31 10:12
S13 5	11	S133 and cataly\$8 with circulat\$4 same fluidized near2 bed same gasif\$7	US-PGPUB; USPAT; USOCR	ADJ	ON	2008/01/31 10:13
S13 6	4	S133 and cataly\$8 with circulat\$4 same fluidized near2 bed same gasif\$7 and (fuel or biomass) and (dust or ash) and tar	US-PGPUB; USPAT; USOCR	ADJ	ON	2008/01/31 10:14
S13 7	1	S133 and cataly\$8 with circulat\$4 same fluidized near2 bed same gasif\$7 and (fuel or biomass) and (dust or ash) and tar and reform\$4 with cataly\$8	US-PGPUB; USPAT; USOCR	ADJ	ON	2008/01/31 10:15
S13 8	7	S133 and cataly\$8 with circulat\$4 and fluidized near2 bed and gasif\$7 and (fuel or biomass) and (dust or ash) and tar and reform\$4 with cataly\$8	US-PGPUB; USPAT; USOCR	ADJ	ON	2008/01/31 10:16



## EAST Search History

S139	6	S133 and cataly\$8 with circulat\$4 and fluidized near2 bed and gasif\$7 and (fuel or biomass) and (dust or ash) and tar and reform\$4 with cataly\$8 not S137	US-PGPUB; USPAT; USOCR	ADJ	ON	2008/01/31 10:16
S140	5174064	@ad<"20050614"	US-PGPUB; USPAT; USOCR	ADJ	ON	2008/01/31 10:17
S141	1319	422/139-147.ccls. and fluidiz\$4 with bed and S140	US-PGPUB; USPAT; USOCR	ADJ	ON	2008/01/31 10:17
S143	1284	422/139-147.ccls. and fluidiz\$4 with bed and S133	US-PGPUB; USPAT; USOCR	ADJ	ON	2008/01/31 10:17
S144	4	S133 and cataly\$8 with circulat\$4 and fluidized near2 bed and gasif\$7 and (fuel or biomass) and (dust or ash) and tar and reform\$4 with cataly\$8 and air and steam not S137	US-PGPUB; USPAT; USOCR	ADJ	ON	2008/01/31 10:20
S145	1	S133 and cataly\$8 with circulat\$4 and fluidized near2 bed and gasif\$7 and (fuel or biomass) and (dust or ash) and tar and reform\$4 with cataly\$8 and air and steam and (stor\$4 or compress\$4) with gas not S137	US-PGPUB; USPAT; USOCR	ADJ	ON	2008/01/31 10:20
S146	0	S133 and cataly\$8 with circulat\$4 and fluidized near2 bed and gasif\$7 and (fuel or biomass) and (dust or ash) and tar and reform\$4 with cataly\$8 and air and steam and (stor\$4 or compress\$4) with gas and (condens\$4 or separat\$4 or scrub\$4) same tar not S137	US-PGPUB; USPAT; USOCR	ADJ	ON	2008/01/31 10:22
S147	102	S143 and cataly\$7 and reform\$4	US-PGPUB; USPAT; USOCR	ADJ	ON	2008/01/31 10:23
S148	16	S147 and (ash or dust) and tar	US-PGPUB; USPAT; USOCR	ADJ	ON	2008/01/31 10:24
S149	15	S148 and steam and air	US-PGPUB; USPAT; USOCR	ADJ	ON	2008/01/31 10:24
S150	2	S149 and adsorb\$4 with bed	US-PGPUB; USPAT; USOCR	ADJ	ON	2008/01/31 10:27

## EAST Search History

S15 1	64	S143 and adsorb\$4 with bed	US-PGPUB; USPAT; USOCR	ADJ	ON	2008/01/31 10:28
S15 2	12	S143 and adsorb\$4 with bed and (dust or ash) and air and steam	US-PGPUB; USPAT; USOCR	ADJ	ON	2008/01/31 10:29
S15 3	2	S143 and adsorb\$4 with bed and (dust or ash) and air and steam and tar and reform\$4 and cataly\$8	US-PGPUB; USPAT; USOCR	ADJ	ON	2008/01/31 10:29
S15 4	0	S150 and (scrub\$4 or strip\$4 or condens\$4 or separat\$4) with tar	US-PGPUB; USPAT; USOCR	ADJ	ON	2008/01/31 10:30
S15 5	2	S150 and (scrub\$4 or strip\$4 or condens\$4 or separat\$4)	US-PGPUB; USPAT; USOCR	ADJ	ON	2008/01/31 10:30
S15 6	2	S150 and (scrub\$4 or strip\$4 or condens\$4 or separat\$4) and (heat\$4 or cool\$4 or temperature)	US-PGPUB; USPAT; USOCR	ADJ	ON	2008/01/31 10:30
S15 7	3	S143 and adsorb\$4 with bed and (dust or ash) and air and steam and reform\$4 and cataly\$8 and (scrub\$4 or strip\$4 or condens\$4 or separat\$4) and (heat exchang\$4 or cool\$4 or temperature)	US-PGPUB; USPAT; USOCR	ADJ	ON	2008/01/31 10:32
S15 8	3146	422/139-147.ccls. and (process or method)	US-PGPUB; USPAT; USOCR	ADJ	ON	2008/01/31 10:51
S15 9	8978	(48/197r,198.1-198.8,199r,199fm, 200-219,197fm,197a).ccls.	US-PGPUB; USPAT; USOCR	ADJ	ON	2008/01/31 10:52
S16 0	673	S159 and fluidiz\$4 with bed and S133	US-PGPUB; USPAT; USOCR	ADJ	ON	2008/01/31 10:53
S16 1	1210	422/139-147.ccls. and fluidiz\$4 with bed and S133 and (process or method)	US-PGPUB; USPAT; USOCR	ADJ	ON	2008/01/31 10:53
S16 2	672	S159 and fluidiz\$4 with bed and S133 and (process or method)	US-PGPUB; USPAT; USOCR	ADJ	ON	2008/01/31 10:53
S16 3	9022	(48/197r,198.1-198.8,199r,199fm, 200-219,197fm,197a,127.1).ccls.	US-PGPUB; USPAT; USOCR	ADJ	ON	2008/01/31 10:54
S16 4	673	S163 and fluidiz\$4 with bed and S133 and (process or method)	US-PGPUB; USPAT; USOCR	ADJ	ON	2008/01/31 10:54
S16 5	14	S163 and fluidiz\$4 with bed and S133 and (process or method) and adsorb\$4 with bed	US-PGPUB; USPAT; USOCR	ADJ	ON	2008/01/31 10:54

## EAST Search History

S16 6	11	S165 and (dust or tar or ash) and air and steam	US-PGPUB; USPAT; USOCR	ADJ	ON	2008/01/31 10:55
S16 7	974	(gas technology institute or institute adj2 gas technology or gti or igt). as. and S133	US-PGPUB; USPAT; USOCR	ADJ	ON	2008/01/31 10:59
S16 8	67	S167 and fluidiz\$5 with bed	US-PGPUB; USPAT; USOCR	ADJ	ON	2008/01/31 10:59
S16 9	2	S167 and fluidiz\$5 with bed and adsorb\$4 and steam and air and reform\$4	US-PGPUB; USPAT; USOCR	ADJ	ON	2008/01/31 10:59